**Algebra 1B Name:**

**1.11 Warm Up Date:**

**Slope-Intercept Form Equations - DO NOW**

|  |
| --- |
| **y = mx + b**  **m = slope (rate of change)        b = y-intercept (starting amount)** |

**Part One: Identify the SLOPE and Y-INTERCEPT of each equation.**

|  |  |  |  |
| --- | --- | --- | --- |
| 1.   y = 2x + 6  slope = \_\_\_\_\_\_\_\_  y-int = \_\_\_\_\_\_\_\_\_ | 2.  y = ⅔ x  + 12  slope = \_\_\_\_\_\_\_\_  y-int = \_\_\_\_\_\_\_\_\_ | 3.  y = -x + 6  slope = \_\_\_\_\_\_\_\_  y-int = \_\_\_\_\_\_\_\_\_ | 4.   y = x - 12  slope = \_\_\_\_\_\_\_\_  y-int = \_\_\_\_\_\_\_\_\_ |
| 5.   y = 10x  slope = \_\_\_\_\_\_\_\_  y-int = \_\_\_\_\_\_\_\_\_ | 6.   y = 1/2x - 1  slope = \_\_\_\_\_\_\_\_  y-int = \_\_\_\_\_\_\_\_\_ | 7.   y = 12  slope = \_\_\_\_\_\_\_\_  y-int = \_\_\_\_\_\_\_\_\_ | 8.   y = 5/6x - 2  slope = \_\_\_\_\_\_\_\_  y-int = \_\_\_\_\_\_\_\_\_ |

**Part Two: Given the SLOPE and Y-INTERCEPT, write the equation of each line in slope-intercept form.**

|  |  |  |
| --- | --- | --- |
| 9.   slope = 7; y-int = 5  equation:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 10.  slope = -2; y-int = 3  equation:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 11.  slope = -1; y-int = -20  equation:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 12. y-int = -2; slope = ¾  equation:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 13. y-int = -6; slope = 1  equation:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 14.  slope = -9; y-int = 0  equation:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**Main Idea: To write the equation of ANY line, we only need to know two things:**

1. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Mild:** Write the equation of the line that has a slope of 5 and a y-intercept of -4.

**Medium:** Write the equation of a line that is **parallel** to the line and has a y-intercept of -8.

**Spicy:** Write the equation of a line that is **parallel** to the line and passes through the point (2, 5).

**Super Spicy:** Write the equation of a line that is **perpendicular** to the line and passes through the point (1, 3).

**FIRE!:** Write the equation of a line that passes through the points (1, 6) and (2, 8)

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1. Write the equation of the line that has a slope of -3 and a y-intercept of 7.
2. Write the equation of the line that has a slope of 1/6 and a y-intercept of -2.
3. Write the equation of a line that is **parallel** to the line and has a y-intercept of 3.
4. Write the equation of a line that is **perpendicular** to the line and has a y-intercept of -8.
5. Write the equation of a line that is **parallel** to the line and passes through the point (1, 6).
6. Write the equation of a line that is **parallel** to the line and passes through the point (1, 2).
7. Write the equation of a line that is **perpendicular** to the line and passes through the point (2, 1).

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**1.11 HW Writing Equations for Parallel and Perpendicular Lines Date:**



